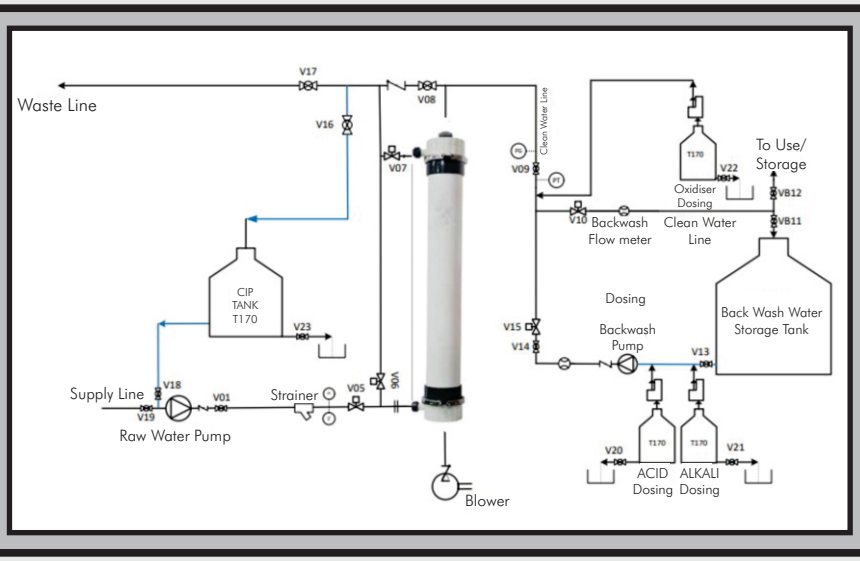
DUF
Ultrafiltration Treatment Plants



Ultra Filtration (UF) is a highly effective treatment process that clarifies turbid and polluted water to a high quality potable condition. The UF models use a large number of small pore capillaries with an outside-in flow configuration and with pore sizes of about 0.03 micron will remove particles and high molecular weight substances, colloidal materials and organic and inorganic polymeric particles. It is therefore particularly suitable for the treatment of polluted surface waters from dams, rivers, reservoirs etc as well as waste water recovery. The process will not remove dissolved solids including sodium, calcium and chlorides and so is less suited to the treatment of ground water with high salt levels. Ultra filtration is a full flow recovery process and contaminants are removed by air scouring and back washing, periodically with a chemical cleaning agent, the process being fully automated using solenoid valves. The heart of the system is the pressurised UF module and various system sizes can be provided by combining modules in parallel.

Systems are frame mounted and supplied as complete units with all necessary accessories and controls for simple integration with the flow process. They offer the following features:-

- High efficiency Dayliff/DuPont ultra filtration membranes.
- Fully automated plant operation including normal filtration cycle, 2 backwash cycles, rinse and forward flush cycles as well as providing various alarms in case of system malfunction. The various cycles are controlled by an integral PLC controller.
- High efficiency Dayliff, Davey or Pedrollo feed, backwash and cleaning pumps
- Integrated cleaning, air scour and backwash systems and two chemical dosers for chlorine and a cleaning agent
- System monitoring instruments including inlet and outlet flow meters and pressure gauges.
- 150 micron pre-filter.
- Skid mounted for simple installation.

DAYLIFF Ultra-Filtration Systems provide a high performance, high efficiency treatment process that produces fully potable water without chemical additions. The process uses low energy consumption and provides consistent quality without frequent operational intervention. Due to the efficiency of the membranes it also offers considerable economies over conventional systems and is the ideal solution where ever pure, potable water is required.

OPERATING PARAMETERS

Operating Pressure: Ranges between 0.5 Bar and 3 Bar depending on raw water quality and temperature.
Maximum Operating Trans Membrane Pressure: 2.1 Bar
Max Operating Temp: 40°C
Operating pH Range: 5-10
Raw Water Quality: : Up to 100 mg/l TSS (300 NTU). A raw water analysis should be provided to establish the extent of pre-treatment necessary.
Recovery Range: 70-98% depending on raw water quality.

SYSTEM DATA

Model	DUF 020D	DUF 040D	DUF 060D	DUF 100D	DUF 120D	DUF 160D	DUF 200D	DUF 250D	DUF 300D
Flow m^3/hr	2	4	6	10	12	16	20	25	30
Module No.	1	1	2	2	3	3	4	5	6
Module Type	IP-51	IP-77	IP-51	IP-77	IP-77	IP-77	IP-77	IP-77	IP-77
Feed Pump	DDS 750	DDS750	DF 6210	DF 6210	DF 6210	MAG 4	MAG 5	MAG 5	MAG 5
Backwash Pump	DDS 750	DPL 750	DPL 750	MAG 3	MAG 4	MAG 5	MAG 5	DPX 3000	DPX 4000
Cleaning Pump	Feed/CIP	Feed/CIP	DPL 750	DPL 750	DPL 750	DPL 750	DPL 750	DPX 1100	DPX 1100
Dosing Pump	AML200	AML200	AML200	AML200	AML200	AML200	AML200	AML200	AML200
Air Blower	CL420HS				CL2R5			CL2R7	
L (mm)	2000	2000	2500	2500	3000	3000	3000	3000	3000
W (mm)	1500	1500	2000	2000	2500	2500	2500	2500	2500
H (mm)	2500	2900	2900	2900	2900	2900	2900	2900	2900
Weight (kg)	260	440	540	625	700	750	850	950	1000